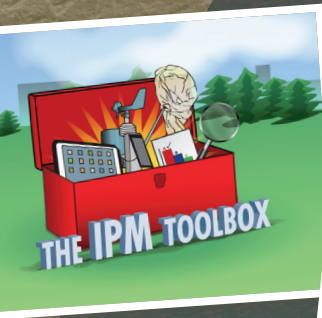


# Northeastern IPM Center



## Annual Report

2023

## From the Director

The Northeastern Integrated Pest Management Center (the Center) is one of four regional integrated pest management (IPM) centers that cover the country, providing leadership, networking, partnership-building, and funding aimed at expanding the efficacy and practice of IPM.

The Center is based at Cornell University, within Cornell Cooperative Extension Administration, and serves the 12 states of the Northeast and the District of Columbia.

All four centers receive core funding on a four-year cycle through the Crop Protection and Pest Management (CPPM) line of the United States Department of Agriculture's National Institute of Food and Agriculture (USDA-NIFA) budget. Our most recent award began September 2022.

The Center supplements that funding with participation on proposals developed by partners working on IPM issues. In the past eight years, the Center has participated in three USDA-NIFA Specialty Crop Research Initiative awards: one on brown marbled stink bug (BMSB), one on spotted lanternfly (SLF), and one on corn earworm in sweet corn. The BMSB and SLF proposals were outcomes of working group awards from the Center to key researchers on these issues, helping them leverage the additional funds. We are regularly invited to participate in proposals by our partners and anticipate additional funding in the future.

The CPPM line also funds the Extension Implementation Program (EIP), which supports the state IPM programs, and the Applied Research and Development Program (ARDP), through which researchers can seek funds.

The state IPM program coordinators, based at land-grant universities in the Northeast, are members of a USDA-approved multistate project, NEERA-2104, as is the Center. NEERA-2104 provides an additional structure for networking, collaborating, and reporting on IPM activities in the Northeast. The Center provides logistical support to NEERA-2104 and reports out to the group on its own activities.

The topics and programs highlighted in this report illustrate the impact of the Center on the study and implementation of IPM through our activities in 2023. Funding distributed through our Partnership Grants Program, support through web development and communications networks, and educational events such as our *IPM Toolbox* webinar series have resulted in leveraged additional funding, stronger collaborations, and greater visibility for the work being conducted in the Northeast.

We have continued our *DELJ in IPM* initiative launched in 2022 to highlight and foster diversity, equity, inclusion, and justice in IPM. Presenters from historically marginalized groups discuss topics related to their research or share their perspectives on overcoming barriers and succeeding in their chosen profession. See [neipmc.org/go/yBmD](https://neipmc.org/go/yBmD) for information on past and upcoming webinars.

The 1-to-15 return-on-investment ratio for the last five years alone highlights the efficacy



**Deborah G. Grantham**, Director,  
Northeastern Integrated Pest  
Management Center

and value of our Partnership Grants Program. This small grants program strengthens regional collaborations, helps partners address current IPM topics in the Northeast and beyond (including impacts on human well-being and health), facilitates dissemination of knowledge, and provides seed funding for project directors to leverage into additional funding.

Economic issues for growers and other IPM practitioners are high on their list of barriers to implementing IPM practices (see our newsletter article at [neipmc.org/go/Kbgc](https://neipmc.org/go/Kbgc)). The Partnership Grants help address those issues. For example:

- In a 2021–2022 project, *Early Season Soil Applications of Entomopathogenic Nematodes in High Tunnel IPM*, Anna Wallingford, University of New Hampshire, identified some of the costs of pests in high tunnels, and therefore some of the economic benefits of IPM in these settings.
- In a 2021–2023 project, *Promoting IPM Practices for Improved Perennial Forage Management in the Northeast*, project director Carl Majewski, University of New Hampshire Cooperative Extension, described the use of an Economic Injury Threshold that can help growers determine when to apply particular IPM practices.
- Another project, 2022–2023, *Educating the Next Generation of Extension Through Experiential Learning of Applied Research Through Evaluating of Efficacy and Financial Viability of Water Sprout Removal for Pear Psylla IPM in Three New England States*, Jaime Pinero, University of Massachusetts, demonstrated the cost efficacy of water sprout removal, a commonly listed IPM strategy for pear psylla. Growers learned that pruning the water sprouts is relatively inexpensive and time efficient, and did not increase the risk of fire blight infection in the study area.

In addition to this regional work, we also administer the StopPests in Housing Program, which operates on a national level with funding from the U.S. Department of Housing and Urban Development (HUD). Center employee Susannah Krysko coordinates and manages the program. HUD-subsidized housing authorities across the county receive training and technical assistance on IPM in their buildings, and further education is available to the community at large via webinars, blogs, and educational materials developed by the program.

The team is close knit and our roles are highly complementary, with Jerrie Haines as program/extension aide, Jana Hexter as grants manager, Kevin Judd as web administrator, Susannah Krysko as coordinator/manager of the StopPests Program, David Lane as evaluator, and Mike Webb as communicator.

Immediate partners include the northeastern state IPM program coordinators, our Advisory Council, USDA-NIFA, the other regional IPM centers, Northeast SARE, other state and federal agencies, and private-sector experts and practitioners. The work could not be accomplished without these partners, but the Center plays a critical role in bringing together many collaborators to build effective and strong networks.

Please contact us ([www.northeastipm.org/about-us/contact/](https://www.northeastipm.org/about-us/contact/)) for more information or if you would like to know how to be involved.

Deborah G. Grantham  
Director, Northeastern Integrated Pest Management Center

## Outstanding Achievements in IPM Award

The Northeastern IPM Center launched the *Outstanding Achievements in Integrated Pest Management Award* in 2019 and has offered it most years since then.

The award honors those whose work on IPM in the Northeast deserves special recognition. Professionals (or organizations) and students are eligible. Nominations come from colleagues, advisors, supervisors, and others familiar with the nominees' work. External reviewers with expertise in IPM evaluate the nominees.

Each winner receives \$500 and agrees to provide a story and/or a webinar presentation for the Center.

Typically, the Center opens a call for nominations in summer or fall and announces winners the following year. To better align with similar annual cycles like the Partnership Grants cycle, the year-labeling convention was revised in late 2023 to designate winners according to the calendar year in which they are announced, not nominated.

### Criteria for Nomination

The award seeks nominations of growers, consultants, researchers, educators, managers, and college/university students (undergraduate, master's, and PhD) in the Northeast region who are working in:

- Agricultural IPM (fruit, vegetables, ornamentals, and livestock and field crops)
- Affordable housing
- Homes
- Schools and institutions
- Natural-areas/water-resources IPM
- Invasive species

The award recognizes effort in:

- Developing new IPM tools
- Implementing or evaluating IPM methods in their operations, businesses, or organizations
- Encouraging demonstrations and adoption of IPM
- Promoting IPM and bolstering the adoption of IPM practices
- Educating others about IPM
- Collaborative efforts

Accomplishments might include impressive research results, technical presentations, posters, reviewed publications, extension publications, or exemplary work with stakeholders such as growers or building managers.

### Qualifications to Nominate

Those submitting nominations must be growers, consultants, researchers, educators, or managers working in IPM. A co-nomination with someone who meets those criteria is also permitted. To nominate a student, one must be a member of the research or extension faculty at the student's university. Self-nominations and nominations from students cannot be accepted.

### 2023 Winners

Three winners were chosen for 2023:

- **Diana Obregon Corredor**, who was recently a PhD student, but as of late 2023, had become a postdoctoral associate in pesticide risk assessment with the New York State IPM Program
- **Lori King**, IPM manager, Claussen's Florist, Greenhouse & Perennial Farm, Colchester, Vermont
- **Robyn Underwood**, extension educator in apiculture, Penn State Extension



Diana Obregon Corredor



Lori King



Robyn Underwood

## StopPests in Housing Program

The StopPests in Housing Program is a national program administered by the Northeastern IPM Center with separate funding from the U.S. Department of Housing and Urban Development (HUD). The program promotes integrated pest management in HUD-assisted housing by providing training, technical assistance, and web- and print-based resources, including trainings and webinars.



In 2023, StopPests continued to provide online training but interest in in-person training picked up.

- **Sites Trained:** Considering both online and in-person trainings in aggregate, StopPests trained representatives from over 70 housing providers, who attended trainings in-person and online. These housing sites represented approximately 6,052 housing units.
- **Technical assistance in IPM implementation:** Thirty-seven housing providers reached out for resources and technical assistance, and StopPests responded to sites spanning the U.S. with contract advice, IPM recommendations, and resident resources.
- **Webinars:** StopPests hosted four webinars in 2023, including our first in Spanish, reaching 1,148 housing professionals. Many StopPests webinars are of potential interest to the general public and recordings are freely available to view. See [stoppests.org/go/webinars](http://stoppests.org/go/webinars) for more information.
- **Conferences and speaking engagements:** Throughout 2023, StopPests was a featured presenter at eight conferences and events, six in-person and two remote.

In a 2023 survey of 83 housing professionals, roughly equal percentages of respondents were most troubled by cockroaches or bed bugs, while 24% were most concerned with mice and 9% most concerned with rats on their properties.

### Subaward: Case Study, Whole Building Multiunit Housing Analysis

With a subaward from StopPests, University of Arizona (UA) entomologist Dawn Gouge, PhD, and her team of extension/research/instruction staff in the Department of Entomology and Maricopa County Extension Office conducted pre- and post-, whole-building pest infestation analysis for German cockroaches, bed bugs, house mice, and other priority pests as applicable in Fillmore Gardens, a 120-unit elderly and/or disabled housing high-rise apartment building in Phoenix, AZ.

### Methods

The University of Arizona team provided pest-control treatment for German cockroaches after the initial building-wide pest inspection and assessment was done.

German cockroach baiting with two different baits—boric acid dust and an insect growth regulator (IGR)—were used to reduce infestations. Wall-void treatments with amorphous silica were applied in apartments with bed bugs to limit travel into surrounding units.

The pest-management service provider (Orkin) continued their service independent of the team's activities but were notified of the apartments with active infestations each time they were assessed.

Apartments were inspected and treated, as appropriate, May through October.

### Results and Takeaways

German cockroach-infested apartments were reduced in six months from 37.5% infested units on May 9, with an average of 23.7 cockroaches per infested unit (9 cockroaches/unit for the building), to 25% infested units on October 30, with an average of 16.7 cockroaches per infested unit (4/unit for the building).

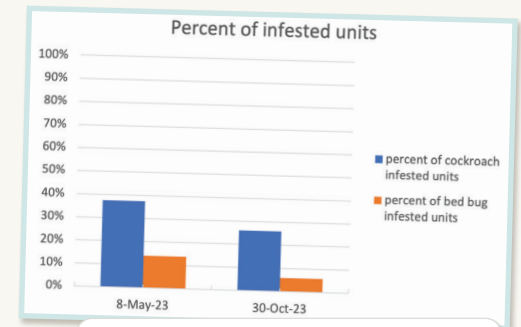
14.2% of apartments were infested with bed bugs May 9, and by October 30, 5.8% of apartments were infested.

Review of pest-control service-provider practices showed little in the way of an IPM approach. Adding these few additional IPM treatment elements to the existing service had a significant impact on reducing pest levels in six months. Further study, including an assessment at 12 months, would reveal the impact of the additional treatments.

The proactive inspections helped reduce the pest infestations, as well. The team alerted the current pest-control contractor when an infestation of any pest was found, leading to several apartments being treated for bed bugs and resolutions of some significant long-term infestations.

In the prior three months before UA evaluations were initially undertaken, there had been only two complaints filed by residents: one for bed bugs (where only German cockroaches were confirmed), and another for general bugs in which insects associated with a pigeon nest were coming in through ceiling vents.

Not treating pest infestations leads to increasing pest populations and spreading to neighboring units. Proactive inspections identify infestations before they are allowed to grow and spread.



**Figure 1.** In six months after IPM intervention, cockroach-infested units were reduced by 33% and bed bug infestations were reduced by 59%.

## Funded Projects & Leveraged Funding

Each year, the Northeastern IPM Center distributes funding through its IPM Partnership Grants Program. Some years, such as for 2023, funding is also available through the Center’s Pest Management Strategic Plans (PMSPs) and Production/Management Profiles (PMPs) Grants Program.

For 2023, no PMSP or PMP applications were received, and all funded projects fell under the Partnership Grants Program. But the Center encourages prospective applicants to keep the PMSP/PMP opportunity in mind when future RFAs are released.

See further below for more information about PMSPs and PMPs.

### IPM Partnership Grants

IPM Partnership Grants projects must foster the development and adoption of IPM, address or identify regional priorities, and benefit the northeastern region at large.

Through a competitive request-for-applications (RFA) process, the program distributes funding to projects that fall under one of three categories: **applied research**, **communications**, and **working groups**. The RFA is announced and opened in the fall of the preceding year and funding begins the following spring.

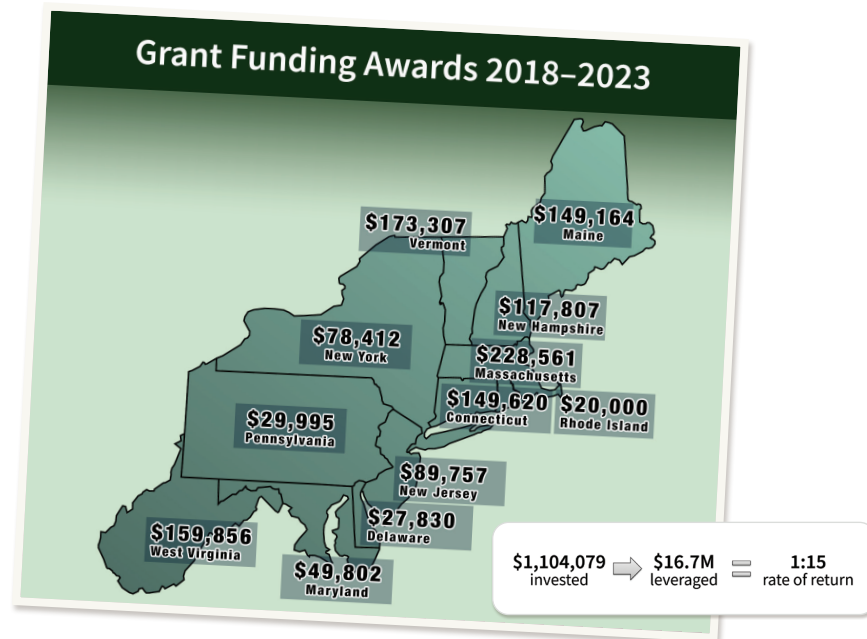
Up to \$200,000 in total was available for 2023, generally with a maximum of \$40,000 per award, although projects that met the criteria for a diversity-focused competitive preference priority were eligible to apply for up to an additional \$10,000. There was a 24-month time limit on funded projects.

### Projects Funded in 2023

Following is the name of each project funded in 2023 along with its project director (PD) and their host institution.

#### Applied Research

- **Weed-Management Decision-Making for Wild Blueberry Growers in Maine** (*Lily Calderwood, University of Maine*)
- **Optimization of Biologicals and ASD Combination Treatment for Managing Soilborne Diseases to Promote Adoption** (*Mahfuz Rahman, West Virginia University*)
- **Evaluation of Insect Exclusion Screens on Pests and Biocontrol Agents in Commercial High Tunnels** (*Carlos Quesada, West Virginia University*)



### Communications

- **#BeReadyForTicks: A Digital Media Tick-Bite-Prevention Education Campaign With Just-in-Time Learning Tools** (*Thomas Mather, University of Rhode Island*)

### Working Groups

- **Establishing an Augmentative Biological Control Working Group for the Northeast Region** (*Hillary Peterson, Maine Department of Agriculture, Conservation, and Forestry*)

### Supporting Projects Across the Northeast

The Center’s remit includes fostering IPM adoption throughout the Northeast, which includes 12 states and the District of Columbia. As such, the Center makes every effort to ensure that the funding it distributes equitably serves the interests of the entire region, and each year, PDs throughout the Northeast are encouraged to apply.

### Leveraged Funding: Indirect Power of Smaller Grants

Projects funded through the IPM Partnership Grants Program often prove highly successful or shine a spotlight on bigger challenges in need of further exploration. PDs and their teams might then use what they have achieved with Center funding to make the case for larger grants that enable them to continue and expand their work.

Through this leveraged-funding approach, considering the Center’s last complete funding cycle (2018–2022) plus the data available so far for 2023 projects, Partnership Grant recipients have used \$1,104,079 in Center funding to leverage over \$16.7 million in additional funding for the PDs, their partners, and their institutions. That represents approximately a 1-to-15 rate of return.

### Two Pests and a Case Study in Leveraged Funding

The power of leveraged funding is vividly illustrated by the efforts against two of the most troublesome invasive species to proliferate in recent years: the brown marmorated stink bug and the spotted lanternfly.

Projects dedicated to combating both pests began as Center-funded working groups that later went on to secure Specialty Crop Research Initiative funding directly from the USDA’s National Institute of Food and Agriculture—the same agency that funds the Center—to continue their work.

### Pest Management Strategic Plans and Production/Management Profiles

The Pest Management Strategic Plans (PMSPs) and Production/Management Profiles (PMPs) Grants Program aims to fund new and updated PMSPs and PMPs.

PMSPs are developed with a regional group of growers and other stakeholders in the Northeast to identify the needs and priorities of a particular commodity, system, or setting requiring pest management. The plans document current pest-management practices and those under research-and-demonstration trial development.

PMPs provide the production or management story, including current pest-management practices, for a particular system—such as production of an agricultural commodity—and look at current research activities directed at finding IPM strategies.

For more information about PMSPs, visit [www.northeastipm.org/ipm-planning/pmsps/](http://www.northeastipm.org/ipm-planning/pmsps/). For more information about crop profiles and PMPs in general, visit [www.northeastipm.org/ipm-planning/crop-profiles/](http://www.northeastipm.org/ipm-planning/crop-profiles/). Both pages include links to searchable databases.

### Additional Information about the Grants Programs

- IPM Partnership Grants Program: [neipmc.org/go/bfgs](http://neipmc.org/go/bfgs)
- PMSP/PMP Grants Program: [neipmc.org/go/pmsp-rfa](http://neipmc.org/go/pmsp-rfa)

## IPM Toolbox Webinar Series

The Northeastern IPM Center’s *IPM Toolbox* webinar series invites experts for hour-long conversations to present—and engage the audience in dialogue—about an IPM practice, method, or effort.

The webinars are free and open to the public. Some are geared toward practitioners in a specific agricultural or pest-management field while others may be of interest to anybody.

Past webinars are posted on the Center’s YouTube channel ([youtube.com/@NortheastIPM](https://youtube.com/@NortheastIPM)). Recordings, along with downloadable presentation slides, are also available on each webinar’s individual page.

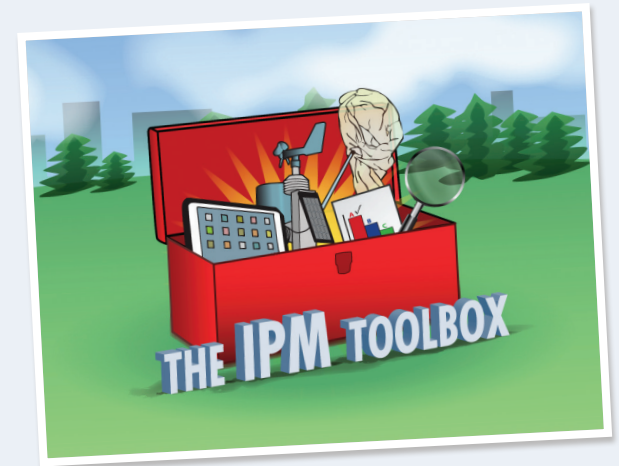
Topics have run the gamut from pests to pollinators and sustainable agricultural practices to IPM outreach for marginalized communities. They have highlighted timely issues such as spotted lanternfly, ticks, varroa mites, mice, cockroaches, and pest-management methods for emerging agricultural industries.

### Diversity in IPM Series

In 2022, the Center launched a *Diversity, Equity, Inclusion, and Justice in IPM* initiative by hosting a series of webinars intended to highlight and foster diversity in IPM.

The webinars were offered as part of the *IPM Toolbox* series. We invited presenters from historically marginalized groups, who shared their perspectives on overcoming professional barriers or discussed their research interests.

For 2023, the spring *Toolbox* webinars continued the ongoing *Diversity in IPM* series.

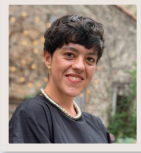


## 2023 Toolbox Webinars

### Spring: Diversity in IPM Series

Language Justice: A Webinar on the Intersection of Language, Justice, and Agriculture Offering Practical Strategies for Cross-language Communication

- **Date:** January 9, 2023
- **Presenters:**
  - Adriana Pericchi (*Director, Apertura*)
  - Ethan Grundberg (*Regional Vegetable Specialist, Cornell Cooperative Extension's Eastern New York Commercial Horticulture Program*)
- **Learn more or view recording:** [neipmc.org/go/CLhm](https://neipmc.org/go/CLhm)
- **Registration and viewership statistics:** Registrants: 376 / Live attendees: 178 / Recording views\*: 181



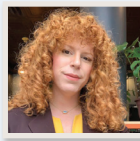
Inclusive and Equitable Evidence-Based Approaches: What Do We Know and Where Do We Go from Here?

- **Date:** April 26, 2023
- **Presenter:** Shannon Archibeque-Engle (*Associate Vice President for Inclusive Excellence, Colorado State University*)
- **Learn more or view recording:** [neipmc.org/go/kmaa](https://neipmc.org/go/kmaa)
- **Registration and viewership statistics:** Registrants: 61 / Live attendees: 29 / Recording views\*: 44



Promoting LGBTQ+ Inclusivity in the IPM Field: Perspectives from IPM Professionals

- **Date:** June 20, 2023
- **Presenters:**
  - Kim Skyrn (*Chief Apiary Inspector, Massachusetts Department of Agricultural Resources (MDAR); East Director, Apiary Inspectors of America (AIA)*)
  - John McMullen (*Postdoctoral Fellow, Indiana University Bloomington*)
  - Samantha Bosco (*Oak Ridge Institute of Science and Education Postdoctoral Fellow, National Agroforestry Center (NAC)*)
  - Mary Centrella (*Director, Cornell Cooperative Extension Pesticide Safety Education Program (CCE-PSEP)*)



- **Learn more or view recording:** [neipmc.org/go/Grijp](https://neipmc.org/go/Grijp)
- **Registration and viewership statistics:** Registrants: 73 / Live attendees: 43 / Recording views\*: 32

### Fall

Weeds of the Northeast

- **Date:** September 21, 2023
- **Presenter:** Antonio DiTommaso (*Professor of Weed Science and Chair of the Soil and Crop Sciences Section in the School of Integrative Plant Science, Cornell University*)
- **Learn more or view recording:** [neipmc.org/go/eKtD](https://neipmc.org/go/eKtD)
- **Registration and viewership statistics:** Registrants: 368 / Live attendees: 189 / Recording views\*: 123



Working with Museums, Libraries, and Archives to Use IPM to Prevent and Combat Infestations

- **Date:** October 26, 2023
- **Presenter:** Rachael Perkins Arenstein (*Partner, A.M. Art Conservation*)
- **Learn more or view recording:** [neipmc.org/go/yfss](https://neipmc.org/go/yfss)
- **Registration and viewership statistics:** Registrants: 88 / Live attendees: 46 / Recording views\*: 35



\* Recording views are as of this writing and subject to increase over time.

### Additional Information

For more information on the *IPM Toolbox* webinar series—including any upcoming webinars and archives of past presentations—visit [www.northeastipm.org/ipm-in-action/the-ipm-toolbox/](https://www.northeastipm.org/ipm-in-action/the-ipm-toolbox/).

Learn more about upcoming and past webinars in the *Diversity in IPM* series at [www.northeastipm.org/ipm-in-action/deij-in-ipm/](https://www.northeastipm.org/ipm-in-action/deij-in-ipm/), which also features links and resources pertaining to DEI in IPM and related fields.

# Research Update Conference

On November 13 and 16, 2023, the Northeastern IPM Center hosted an online research update conference intended to increase collaboration and awareness about current IPM-related research and extension throughout the Northeast in an engaging, interactive way.

Typically offered as one session in previous years, for 2023, the conference was divided into two 1.5-hour sessions on different days in the same week due to the large number of presenters.

The conference featured brief presentations from active IPM-related projects funded by one of several sources:

- The Center’s own grants programs (for more information, see the “Funded Projects” section of this report)
- The Northeast Sustainable Agriculture Research and Education (NE SARE) Program
- USDA-NIFA’s Applied Research and Development Program (ARDP) and Extension Implementation Program (EIP)

Featured speakers submitted five-minute prerecorded presentations in which they discussed one or two highlights from their projects. Live Q&A sessions were interspersed throughout.

The recordings are available for viewing on the Center’s YouTube channel ([youtube.com/@NortheastIPM](https://youtube.com/@NortheastIPM)) and on the conference pages at:

- Day 1: [neipmc.org/go/CvWD](https://neipmc.org/go/CvWD)
- Day 2: [neipmc.org/go/PMhx](https://neipmc.org/go/PMhx)

Speaker	Project Title	Affiliation	Funding Source
<b>Day 1</b>			
<b>Jaime Pinero</b>	Multi-cultivar grafting: A novel low-cost, grower-friendly attract-and-kill approach to manage key apple pest	University of Massachusetts–Amherst	ARDP
<b>Long He</b>	Precision spraying technologies for tree fruit orchards	Pennsylvania State University–University Park	ARDP
<b>Kurt Vollmer</b>	Using spring-seeded grass cover crops to reduce herbicide inputs in plasticulture production	University of Maryland	ARDP
<b>Leo Kerner</b>	Developing a perennial living mulch system to manage insect pests in Northeastern cantaloupe fields	University of Maryland	ARDP



Speaker	Project Title	Affiliation	Funding Source
<b>Megan Schierer</b>	Operationalizing eDNA technology for disease vector mosquito surveillance and control	University of Maine	Center
<b>Dwayne Joseph</b>	Between and within: Utilizing biosolarization and living mulches to manage weeds in vegetable systems	University of Maryland	ARDP
<b>Matt Frye</b>	IPM is for everyone: Enhancing the reach and impact of a virtual IPM education series	New York State IPM Program at Cornell University	Center
<b>Emma Waltman</b>	Exposure to insecticide drift in an insectary strip does not negatively affect survival of <i>Trissolcus japonicus</i>	Rutgers University	NE SARE
<b>Amara Dunn-Silver</b>	Increasing awareness of biocontrol as part of IPM through digital outreach: An update on progress	New York State IPM Program at Cornell University	Center
<b>Lynn Sosnoskie</b>	Integrated weed management in hemp: A multistate effort to evaluate practices and develop recommendations	Cornell University	ARDP
<b>Debamalya Chatterjee</b>	Novel maize germplasm for sustainable pest management	Pennsylvania State University	NE SARE
<b>Rachel White</b>	Integrated pest management for control of gastropod vectors on pastures	University of Maine	NE SARE



Speaker	Project Title	Affiliation	Funding Source
<b>Day 2</b>			
<b>Bryony Sands</b>	A systems approach to developing IPM for cattle producers in the Northeast: Social, environmental, and economic analyses	University of Vermont Extension	Center
<b>Elissa Ballman</b>	Equine pest management profile: A new guide for managing equine pests in the Northeast	University of Maine	Center
<b>Arash Ghalegholabbehbahani</b>	Application of ultraviolet light and MilStop to restrict powdery mildew infestation in organic greenhouses	Rodale Institute	NE SARE
<b>Michael A. Monzon</b>	Surveying an insect collection from a 17th-century Northeastern agrarian settlement to determine changes in beneficial insects, pests, and climate	Rutgers University	NE SARE
<b>Veronica Yurchak</b>	Creating an ecofriendly pest suppression program in sweet corn	University of Maryland	NE SARE
<b>Quan Zeng</b>	Using yeast-based biocontrol to manage fire blight infections in the Northeast	Connecticut Agricultural Experiment Station	Center
<b>Rose Ogutu</b>	Optimizing sustainable integrated pest management practices in high tunnel crops and needs assessment	Delaware State University	NE SARE
<b>Alejandro Calixto</b>	Integrated pest management program for New York State: 2021–2024	New York State IPM Program at Cornell University	EIP
<b>Philip Fanning</b>	Classical biological control for spotted wing drosophila in the northeastern United States	University of Maine	ARDP
<b>Simon Zebelo</b>	Empowering small-scaled, limited-resource and other farmers with IPM knowledge	University of Maryland-Eastern Shore	EIP
<b>Betsy Lamb</b>	Greenhouse IPM scout school: Online and hands-on training for current and next generation scouts	New York State IPM Program at Cornell University	NE SARE
<b>Matt Frye</b>	Municipal rodent IPM working group	New York State IPM Program at Cornell University	Center

## Review and Evaluation of Impacts

### Partnership Grants and Leveraged Funding

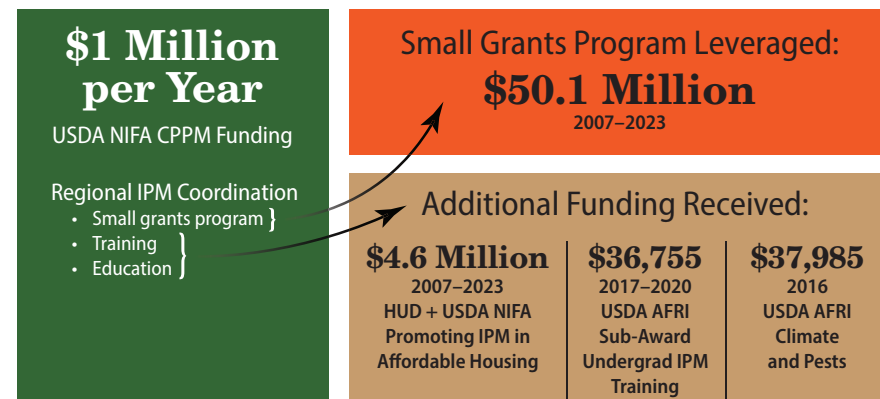
Analysis of 2018–2023 completed Partnership Grant projects from the last Northeastern IPM Center funding cycle (2018–2022) plus 2023 (first year of current funding cycle) shows that \$1,104,079 invested by the Center has helped lay the groundwork for project directors to secure \$16,789,546 in additional funding for themselves, their partners, and their institutions.

As discussed further in the section of this report focusing on Partnership Grants, that amounts to approximately a 1-to-15 rate of return, but in some years the return ratio was much larger: 1:25 in 2018 and 1:23 in 2021 (anecdotally, we have ample reason to attribute the lower 2019 and 2020 ratios to the COVID-19 pandemic halting research and extension activities; this coincided with the timelines of a number of projects, given that they may typically be conducted for up to 24 months).

Furthermore, some individual projects greatly exceed these ratios. One noteworthy example in 2023 was, “A Systems Approach to Developing IPM for Cattle Producers in the Northeast: Social, Environmental, and Economic Analyses,” which received \$53,741 in initial funding but leveraged an additional \$2,397,596, for a ratio of 1-to-45.

This 2018–2023 aggregate data is current as of May 2023. These numbers are subject to change as final reports continue to be submitted.

### Northeastern IPM Center Leveraged Funding **\$54.8 Million**

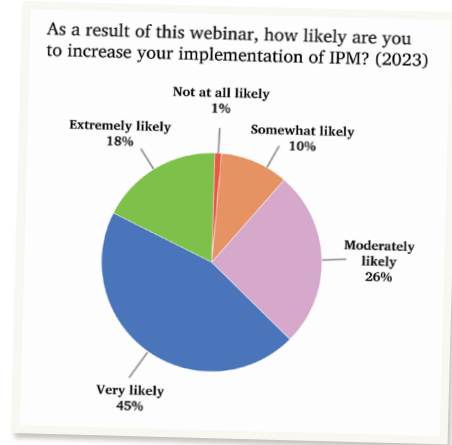


**Strategic Leveraging:** Through our Partnership Grants program, project directors have leveraged funding at an impressive ratio of 1:10 from 2007 through 2023. In total, our small grants program has leveraged \$50.1 million from 2007 to 2023. This strategic leveraging magnifies the impact of our investments, driving innovation in IPM.

## Impact Statements

The Center develops and updates impact statements to explain and illustrate the beneficial outcomes of the work we fund. Impact statements are available on the Center website at [neipmc.org/go/impacts](https://neipmc.org/go/impacts).

Also available on that page is an impact statement template, which can be used to educate and train extension educators and others in the Northeast on how to better document IPM project impacts.



## IPM Toolbox Webinar Polling

We have evaluated the impact of our *IPM Toolbox* webinars using Zoom polling data.

For 2023, we saw particularly encouraging responses to the post-webinar poll question, “As a result of this webinar, how likely are you to increase your implementation of IPM?,” with a substantial majority of respondents indicating they were “extremely likely” (18%) or “very likely” (45%) to do so.

## IPM News and Events Roundup

Our weekly *IPM News and Events Roundup* e-mail newsletter continues to be impactful, and we regularly receive compliments and kudos from recipients. Comments have included remarks on the amount of good information packaged in the *Roundup* and the wealth of opportunities it provides to people in various professions, both within the Northeast and in other regions as well.

## IPM Adoption Survey

In 2021, the Center designed and distributed a survey to state IPM coordinators throughout the country. The results of that survey have continued to inform ongoing projects and deliverables.

The survey questions were designed in collaboration with the Southern IPM Center and are categorized as:

- IPM adoption drivers and barriers
- IPM education and training
- Impacts of IPM
- Impact of regional IPM centers
- Sources of more IPM data

The survey results were analyzed to produce a poster, *IPM Adoption Perspec-*

*tives from the Regions: Barriers and Recommendations*, for the 10th International IPM Symposium—held in March 2022—and an article, “IPM Adoption and Impacts in the United States,” published in the *Journal of IPM* in early 2023.

Lessons learned from this survey have also helped us revise our Partnership Grants RFA to encourage proposals that contain cost-benefit analyses. These changes were first rolled out in the 2022 RFA.

Also, based on the survey questions, we are creating a standardized report form that can be used to systematically gather IPM activities, adoption, and impact data from the state IPM coordinators at the annual meetings of the IPM Extension and Research Activities (ERA) networks in each region of the country (northeastern: NEERA-2104; southern: SERA-03; north central: NCERA-222; western: WERA-1017).

This standardized reporting questionnaire should help us all better understand IPM adoption, impacts, and priorities at the state, regional, and national levels.

## Common Measures

The Center led the completion of common measures that all four regional IPM centers can report against to improve evaluation efforts across the USDA National Institute of Food and Agriculture’s (USDA-NIFA’s) Crop Protection and Pest Management (CPPM) program, under which the centers are funded.

This means the common measures were designed for the entirety of CPPM. In addition to the Regional Coordination Program (RCP, effectively the regional IPM centers), this includes the Applied Research and Development Program (ARDP) and the Extension Implementation Program (EIP).

The common measures were implemented in the reporting questions within the new regional IPM centers grant-management system, which was formally launched in 2022. In 2023, we began receiving final project reports that will allow us to start measuring the aggregated outcomes and impacts of RCP, ARDP, and EIP.

## Additional Efforts

In 2023, we continued working with evaluation experts to identify and analyze existing evaluation data, such as the USDA National Agricultural Statistics Service (NASS) Chemical Use Survey.

We have also continued tracking responses to our publications and communications.

Partnership Grant proposals were reviewed for potential impacts—including changes in knowledge, attitudes, skills, and aspirations—as part of the award decisions. We continue to mine Partnership Grant project final reports for new tools and approaches to implementing IPM as well as highlighting results from working groups.

*IPM Insights* is the Northeastern IPM Center's flagship publication, featuring news from and about the Center. It includes updates on research and timely issues, success stories from funded projects, news about prominent figures in the world of IPM, useful resources, and funding opportunities, among other topics.

*Insights* is the product of a team effort involving writing, editing, content curation and amplification, and design and layout.

Formerly a print-first publication that was also cross-posted to the Center's website, for the last few years, *Insights* has been published only in two electronic formats: as individual web pages for separate articles, and as a single downloadable PDF for an entire issue. However, the Center retains the ability to order small print runs upon request.

## 2023 Highlights

### Center News and Funding Opportunities

- Overview of a paper by the Center, published in the *Journal of IPM*, reporting on a survey examining IPM adoption in the U.S. in terms of drivers and barriers
- A case study in improving pest management in multifamily housing supported by a subaward from the Center's StopPests in Housing Program
- New projects funded through the Center's IPM Partnership Grants Program
- Diversity, equity, inclusion, and accessibility (DEIA)-focused grants and fellowships offered on a national level by the regional IPM centers
- New *IPM Toolbox* webinars, including additional webinars announced as part of the Center's *Diversity in IPM* initiative launched in 2022, as well as new webinars hosted through the StopPests in Housing Program
- Call for nominations for the *Outstanding Achievements in IPM Award* and announcement of winners from previous round

### Pests and Management Practices

- A tick-themed issue featuring the New York State Tick Blitz Program (a community-based-science initiative), an overview of tick-related projects funded by the Center, and a pest alert on ticks and tick-borne diseases
- The critical ecosystem role played by turkey vultures and how it supports IPM
- IPM considerations for landscape composition and configuration
- The bird-control challenge presented by Canada geese
- Avian flu as an ongoing threat and use case for IPM

**Study: Improving Pest Management in Multifamily Housing**  
 By Savannah Kovacs, MS, StopPests in Housing Program Manager

The COVID-19 pandemic and ensuing efforts to recover have brought unique challenges to society, with some ramifications yet to be fully realized. Pandemic-related interruptions in services included a reduction or cessation of pest management inspections and treatments in multifamily housing, creating an opportunity for pest activity and infestations to grow. Pest resurgence in low-income housing, particularly those properties managed by public housing agencies (PHAs)—one of particular concern.

Now that services are resuming, building managers and pest control professionals are left catching up and, in some cases, struggling to get pests under control in multifamily housing. Even prior to COVID, there were relatively low expectations for pest management success in PHAs. That, combined with pandemic-caused interruptions, have resulted in lasting implications in low-income and public housing.

Pandemic-related interruptions included a reduction or cessation of pest management inspections and treatments in multifamily housing, creating an opportunity for pest activity and infestations to grow.

**Challenge Begins Opportunity**  
 Stephen Kull, PhD, an entomologist at the University of Minnesota, recognized the opportunity to rethink pest control and develop a new system of approaching pest management for multifamily housing.

Kull received a subaward through the StopPests in Housing Program, which is administered by the Northeastern Integrated Pest Management (IPM) Center through a contract with the Office of Lead Hazard Control and Healthy Homes at the Department of Housing and Urban Development (HUD).

Kull uses data analysis to map out a pest control plan that allows for constant assessment and improvement of pest-control practices.

**How Traditional Approaches Come Up Short**  
 Without periodic assessments, it's easy to remain complacent with the status quo, where there's no expectation of progress in reducing overall pest populations. Traditionally, pest control efforts in multifamily housing have followed a typical cycle:

1. Complaint from a single unit within a building
2. Response with various treatment options on that unit
3. Wait until next complaint or detection
4. Additional response

This cycle becomes an infinite loop because crucial steps are often missing:

- Evaluating the whole building, not just individual affected units and habitats in the structure
- Using pre- and post-treatment assessment of pest activity to refine control procedures
- Scheduling critical preventative actions
- Fostering effective communication between facility managers and residents
- Monitoring costs for budgetary efficiencies

Because of these omissions, there is ongoing frustration experienced by residents, staff, and management alike, as well as substandard pest control outcomes.

Communication must be across all levels of the organization, from the pest management technicians all the way up to the chief operating officer, executive director, or upper-level management. To improve IPM practices, an organization should first look at their system of communication at all levels and ensure feedback from the technicians is incorporated.

IPM data going back to 2009 was analyzed and revealed that 67 to 82 percent of the pest control work orders were from 11 to 16 percent of the apartments, meaning that the majority of resources were going to a relatively small number of apartments with chronic infestations and repeat pest services. Chronic infestations were defined as those that required more than two treatments annually.

Once they determined that the pest control treatments in these chronic apartments were not sufficiently thorough, they looked at how time and attention could be increased in those units for more effective control. If time and resources were spent upfront, fewer repeat visits were needed.

Their first case study...

It follows up on that the they could do need extra if "each" led or been, it in such, indicate through station names.

**INTEGRATED PEST MANAGEMENT**  
**Insights**

**INTEGRATED PEST MANAGEMENT**  
**Insights**

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### People and Partner Organizations

- New edition of the classic *Weeds of the Northeast* comprehensive identification guide, and a remarkable coincidence involving one of the co-authors, Antonio DiTommaso, a professor at Cornell University
- Introduction to John Tooker, Pennsylvania state IPM coordinator

### For More Information

To view current and past issues of *IPM Insights* in web and PDF formats, visit [neipmc.org/go/ipm-insights](http://neipmc.org/go/ipm-insights).

## Communication

In addition to the *IPM Insights* newsletter discussed elsewhere in this report, the Northeastern IPM Center utilizes a number of communication channels and platforms to distribute and share news and resources about integrated pest management and related topics—in the Northeast and beyond.

### Websites

[NortheastIPM.org](http://NortheastIPM.org) – Our main website for promoting and funding IPM in the Northeast

[StopPests.org](http://StopPests.org) – Training materials, pest solutions, and advice for implementing IPM in multifamily housing

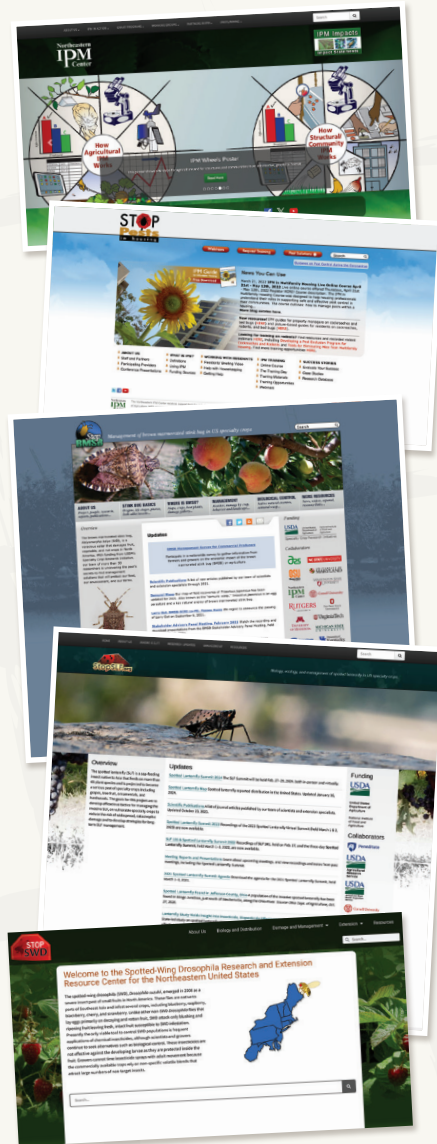
[StopBMSB.org](http://StopBMSB.org) – Biology, ecology, and management of brown marmorated stink bug in specialty crops

[StopSLF.org](http://StopSLF.org) – Biology, ecology, and management of spotted lanternfly in specialty crops

[StopSWD.org](http://StopSWD.org) – Biology, ecology, and management of spotted wing drosophila in specialty crops

### IPM News and Events Roundup

The *IPM News and Events Roundup* is a weekly e-mail newsletter sent to the Center's primary communications e-list. The *Roundup* generally does not contain any content of its own, but rather is a compilation of links with summaries to outside sources about IPM-related news, research, resources, webinars, meetings, events, job opportunities, and more.



Website	Visitors, 2023
NortheastIPM.org	45,615
StopPests.org	25,928
StopBMSB.org	49,627
StopSLF.org	14,930
StopSWD.org	263

The *Roundup* is a mostly plaintext e-mail newsletter that was launched in January 2019. Along with the Center's *IPM Insights* newsletter, the *Roundup* is part of a two-pronged periodical publication strategy, with the *Roundup* filling a different niche through its up-to-the-minute weekly schedule, compilation-based structure, and simplified layout.

Past issues are archived on the Center's website at [neipmc.org/go/HbdR](http://neipmc.org/go/HbdR).

### Communications E-list

The Center maintains a primary e-mail communications list. As of this writing, the list has 3,377 subscribers.

The list is for Center announcements—not discussion—and traffic is intentionally kept to a minimum. In addition to the weekly *Roundup*, the list is used to distribute occasional messages about Center news and events.

Anybody may request to be subscribed to the comm list by e-mailing [northeastipm@cornell.edu](mailto:northeastipm@cornell.edu).

### Social Media

The Center is active on social media platforms including Facebook, X (known as Twitter until partway through 2023), and YouTube.

Facebook and X feature posts about Center news and shares of IPM-related content from media outlets and partner organizations. YouTube is an extensive repository for recordings of webinars, conferences, and meetings presented or hosted by the Center.

- **Facebook:** [www.facebook.com/NEIPMCenter/](http://www.facebook.com/NEIPMCenter/)
- **X (formerly Twitter):** [twitter.com/NortheastIPM](https://twitter.com/NortheastIPM)
- **YouTube:** [youtube.com/@NortheastIPM](https://youtube.com/@NortheastIPM)

## Advisory Council and Steering Committee

The **Advisory Council** provides a broad vision to guide the Northeastern IPM Center. Members represent a wide range of stakeholders, linking the Center to stakeholder needs and priorities for pest management programs. Advisory Council members are also an important avenue for Center outreach to their constituencies and beyond. The **Steering Committee** is the Center's policy-setting body, providing direction for timely and effective Center management.

Name	Affiliation	State
Rakesh Chandran	West Virginia University	WV
James Dill	University of Maine	ME
Carol Glenister	IPM Laboratories	NY
Deborah Grantham*	Cornell University	NY
George Hamilton	Rutgers, The State University of New Jersey	NJ
Glen Koehler*	University of Maine	ME
Bob Mann	National Assoc. of Landscape Professionals	DC
Carrie Mansue	Rutgers Cooperative Extension	NJ
Vijay Nandula*	USDA-NIFA National Program Leader	KS
Alicyn Smart	Northeast Plant Diagnostic Network, University of Maine	ME
Margaret Smith*	Cornell University	NY
Andrea Szylvian*	EPA Region 1, Pesticide Program	MA
Lisa Tewksbury	University of Rhode Island	RI
Julie Urban	The Pennsylvania State University	PA
Amber Vinchesi-Vahl	University of New Hampshire	NH
Simon Zebelo	University of Maryland Eastern Shore / IR-4	MD
*Steering Committee member		



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